



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/698,103	10/31/2003	Kaoru Kusafuka	CMO.0011US (92097US)	8953
21906	7590	05/18/2005	EXAMINER	
TROP PRUNER & HU, PC 8554 KATY FREEWAY SUITE 100 HOUSTON, TX 77024			CHOWDHURY, TARIFUR RASHID	
			ART UNIT	PAPER NUMBER
			2871	

DATE MAILED: 05/18/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Ejk

Office Action Summary

Application No.

10/698,103

Applicant(s)

KUSAFUKA ET AL.

Examiner

Tarifur R. Chowdhury

Art Unit

2871

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-35 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 17-32 is/are allowed.
- 6) ☒ Claim(s) 1-11 and 33-35 is/are rejected.
- 7) ☒ Claim(s) 12-16 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 31 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Election/Restrictions

1. After further consideration, the examiner is hereby withdrawing the restriction requirement mailed on 01/11/05 and thus all of the claims are examined on the merits.

Priority

2. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Specification

3. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to

consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

6. Claims 1-11 and 33-35 are rejected under 35 U.S.C. 103(a) as being unpatentable over applicant's admitted prior art (AAPA) in view of Yamakita et al., (Yamakita), USPAT 6,603,525.

7. The AAPA described in the instant application discloses and shows in Fig. 9, an in-plane switching type image display apparatus comprising:

- a pixel electrode (101);
- a common electrode (102);
- a thin film transistor (applicant's switching element (105)) to control supply of an electric potential to the pixel electrode; and
- an auxiliary electrode (104) forming an auxiliary capacitance between a portion of the auxiliary electrode and a portion of the pixel electrode.

The AAPA differs from the claimed invention because it does not explicitly disclose that the common electrode is set at a first potential and the auxiliary electrode is set a second, different electric potential.

Yamakita discloses a liquid crystal display device wherein the common electrode is set at a first potential and the auxiliary electrode is set at a second, different electric potential. He also discloses that by applying different voltages to the common electrode and the auxiliary electrode, a satisfactory image display without residual spray-aligned pixels can be obtained (col. 19, lines 2-33).

Yamakita is evidence that ordinary workers in the art would find a reason,

suggestion or motivation to set different electric potentials at the common electrode and the auxiliary electrodes.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify the display device of the AAPA by setting the common electrode to a first electric potential and the auxiliary electrode at a second, different electric potential for advantages such as to obtain an image display without residual spray-aligned pixels, as per the teachings of Yamakita.

Accordingly, claims 1, 2, 6 and 33 would have been obvious.

As to claims 3 and 34, the AAPA described in the instant application discloses a first electric potential section (108) to supply a first electric field potential to the common electrode and since the modified display device of the AAPA would have a first electric potential to the common electrode and a second, different electric potential to the auxiliary electrode, the auxiliary electrode having a second electric potential supplying section would have been obvious.

As to claims 4 and 35, the AAPA described in the instant application also discloses that an electric field is generated between the pixel electrode and common electrode in response to application of the electric potential to the pixel electrode by the switching element.

As to claim 5, the AAPA discloses that the display device is in-plane switching type and thus the electric field being parallel to a surface of the array substrate is inherent and further the AAPA discloses that all of the pixel electrode, common electrode, switching element and auxiliary electrode are formed on the same substrate.

As to claim 7, Fig. 9 of the AAPA also shows that the apparatus further comprising a signal line (107), the switching element (105) connected between the signal line and the pixel electrode and a scanning line (106) to turn the switching element on or off.

As to claims 8 and 9, the AAPA further shows in Fig. 9 that the image display apparatus further comprising additional pixel electrodes and common electrodes associated with other display pixels, wherein the additional pixel electrode comprises a second pixel electrode (101c) and the additional common electrodes comprise a second common electrode (102c), a second switching element (105c) to control an electric potential supplied to the second pixel electrode and a second auxiliary electrode (104b) forming an auxiliary capacitance between a portion of the second auxiliary electrode and a portion of the second pixel electrode.

As to claim 10, the AAPA shown in the instant application also shows in Fig. 9 that the image display apparatus further comprising a shunt line (109) connected to the common electrode (102) and a switching section (110) connected between the scanning line (106) and the shunt line (109), the switching section adapted to turn on in response to an elevated voltage on the scanning line (page 4, paragraph 07).

As to claim 11, using a short-circuit detector to detect a source of a short circuit is common and known in the art and thus would have been obvious to increase manufacturing yield.

Allowable Subject Matter

8. Claims 17-32 are allowed.

Art Unit: 2871

9. Claims 12-16 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion


10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tarifur R. Chowdhury whose telephone number is (571) 272-2287. The examiner can normally be reached on M-Th (6:30-5:00) Friday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Kim can be reached on (571) 272-2293. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

TRC
May 11, 2005


TARIFUR R. CHOWDHURY
PRIMARY EXAMINER